

## DEPARTMENT OF THE INTERIOR

## 50 CFR Part 17

**Endangered and Threatened Wildlife and Plants; Proposal To Determine *Lesquerella filiformis* (Missouri Bladder-Pod) To Be an Endangered Species**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to list *Lesquerella filiformis* (Missouri bladder-pod), an annual plant endemic to the unglaciated prairie area of southwest Missouri, as an endangered species under the authority of the Endangered Species Act of 1973, as amended. *Lesquerella filiformis* is presently known at only nine locations in Dade, Greene, and Christian Counties, Missouri. The species is vulnerable due to low population numbers, limited distribution, and potential destruction of prairies habitat. This proposal, if made final, would implement Federal protection provided by the Endangered Species Act of 1973, as amended, for *Lesquerella filiformis*. The Service seeks data and comments from the public on this proposal.

**DATES:** Comments from all interested parties must be received by June 6, 1986. Public hearing requests must be received by May 22, 1986.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Endangered Species Coordinator, U.S. Fish and Wildlife Service, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111. Comments and materials received will be available for public inspection during normal business hours, by appointment, at the above address.

**FOR FURTHER INFORMATION CONTACT:** James M. Engel, Endangered Species Coordinator (see **ADDRESSES** above) (612-725-3276 or FTS 725-3276).

**SUPPLEMENTARY INFORMATION:****Background**

*Lesquerella filiformis*, a member of the mustard family, was first collected in 1887 in Missouri. However, the name *Lesquerella angustifolia* was misapplied to these early collections (Payson, 1921). It was not until later that Rollins (1956) described *Lesquerella filiformis*. In later work, Rollins and Shaw (1973) maintained *Lesquerella filiformis* as a distinct species.

*Lesquerella filiformis* is an annual with erect hairy stems to approximately 20 centimeters (8 inches) in height, branching from the base. Basal leaves

are hairy on both surfaces, 1-2.25 centimeters (0.4-0.9 inch) long, 0.3-1 centimeter (0.1-0.4 inch) wide broadly rounded, and taper to a narrow petiole. Stem leaves are 1-3.2 centimeters (0.4-1.3 inches) long, 1.6-16 millimeters (0.06-0.6 inch) wide, and are also hairy on both surfaces, appearing silvery. Light yellow flowers with four petals usually appear at the tops of the stems in late April or early May (Morgan 1980). Morgan (1983) observed that flowering and seed dispersal usually occur within a period of four weeks. As the green seed capsules develop and mature, they turn light tan, split open, and disperse the seeds, leaving a papery septum attached to the pedicel. The species survives the hot summer in the form of seeds; germination occurs in the fall, and the plants overwinter in the rosette stage. They flower, fruit, and shed seeds when favorable temperatures and peak rainfall occur in the spring (Morgan 1983).

*Lesquerella filiformis* is restricted to the unglaciated prairie region of southwest Missouri at nine sites within Greene, Dade, and Christian Counties. It is believed to be extirpated in Jasper and Lawrence Counties, Missouri. It can be distinguished from the only other *Lesquerella* in Missouri, *Lesquerella gracilis* var. *gracilis*, an introduced species, by its gray-silvery appearance.

According to Morgan (1983), *Lesquerella filiformis* is found in open limestone glades where soils are shallow and the underlying limestone bedrock outcrops at or very near the ground surface. Associated species frequently found with *Lesquerella filiformis* are *Arenaria patula*, *Camassia scilloides*, *Northoscordum bivalve*, *Opuntia compressa*, *Satureja arkansana*, *Tradescantia tharpaii*, *Verbena canadensis*, and a species of *Sedum*. *Lesquerella filiformis* is usually not dominant within the community (Morgan 1980).

Three of the nine known populations of *Lesquerella filiformis* occur on Missouri State highway rights-of-way and are subject to periodic mowing; four populations are on private land with no protection; and two populations are found within the Wilson Creek National battlefield (Morgan, personal communication 1985).

Federal Government actions on this species began with section 12 of the endangered Species Act of 1973 (Act), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the

Service published a notice in the **Federal Register** (40 FR 27823) of its acceptance of the Smithsonian Institution report as a petition within the context of section 4(c)(2) (petition acceptance is now governed by section 4(b)(3) of the Act), and of its intention thereby to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975, **Federal Register** publication.

*Lesquerella filiformis* was included in the July 1, 1975, notice of review and the June 16, 1976, proposal. General comments received in relation to the 1976 proposal were summarized in the **Federal Register** on April 26, 1978 (43 FR 17909). On December 10, 1979, the Service published a notice (44 FR 70796) withdrawing the portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired due to a procedural requirement of the 1978 Amendments. On December 15, 1980 (45 FR 82479), and September 27, 1985 (50 FR 39525), the Service published revised notices of review for native plants in the **Federal Register**; *Lesquerella filiformis* was included in those notices as a category-1 species. Category-1 species are those for which data in the Service's possession indicate that proposing to list is warranted.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982, be treated as having been submitted on that date. The deadline for a finding on those species, including *Lesquerella filiformis*, was October 13, 1983. On October 13, 1983, October 12, 1984, and again on October 11, 1985, the petition finding was made that listing *Lesquerella filiformis* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Such a finding requires that the petition be recycled, pursuant to section 4(b)(3)(C)(i) of the Act. The present proposal constitutes a finding that the listing is warranted. The Service proposes to implement the petitioned action in accordance with section 4(b)(3)(B)(ii) of the Act.

A status report compiled by Morgan (1980), as well as other pertinent literature (see "Literature Cited," below) provide the biological basis for this

proposed rule. The data demonstrate low numbers of plants and continuing threats to the species.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424) set forth the procedures for adding species to the Federal lists. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Lesquerella filiformis* (Rollins) are as follows:

*A. The present or threatened destruction, modification, or curtailment of its habitat or range.* *Lesquerella filiformis* occurs at nine locations in the unglaciated prairie area of southwest Missouri in limited portions of Dade, Greene, and Christian Counties. Historical data indicate that *Lesquerella filiformis* has probably never been more widespread than it is at present (Morgan 1983). Morgan (1980) estimated a total of about 550 individual plants at four sites. Although there are now nine known sites, the low number of individual plants makes the species vulnerable to collecting and other human disturbance. Two of the populations are within the Wilson's Creek National Battlefield (WCNB) in Christian and Greene Counties, where a system of interpretive trails extends through the sites. These populations receive some disturbance from visitors to the Battlefield site, but Morgan (1983) concluded that such disturbance may help maintain the *Lesquerella filiformis* populations. Over 124,000 people visited WCNB in 1984; by 1990, it is expected 500,000 people may visit the area (D.L. Lane, Superintendent, WCNB, pers. comm. 1985). Research is needed to determine proper management techniques for maintenance of the species, especially at disturbed sites. The National Park Service is aware of the significance of *Lesquerella filiformis*. Three populations of *Lesquerella filiformis* occur in Dade County within Missouri highway rights-of-way. Two of these populations extend onto private land. Because of yearly right-of-way treatments, there is a definite threat of destruction to these populations. Cooperation with the Department of Highways and Transportation is necessary in order to provide these sites additional protection from accidental mowing or chemical treatment. The remaining four populations are located on private property; two sites in Dade

County and one each in Greene and Christian Counties. The Service is not aware of any plans to develop or alter these sites; however, the prairie habitat could be lost due to more intensive agricultural activities.

Morgan (1983) reported that *Lesquerella filiformis* populations can be found on highway rights-of-way for one or two seasons, then disappear completely from these known sites during the subsequent year. This phenomenon further points up the need for further research and management in order to maintain and promote the species.

*B. Overutilization for commercial, recreational, scientific, or educational purposes.* Wildflower collectors may reduce populations in more accessible sites. As Steyermark (1963) pointed out, this plant, with its handsome yellow flowers, makes a desirable addition to rock gardens and may be vulnerable to overcollecting. Plants within the Wilson's Creek National Battlefield cannot be collected without a permit from the National Park Service.

*C. Disease or predation.* Seed predation by insects and fungal infection of developing capsules have been reported by Morgan (1983). It is not known whether the ensuing loss of reproductive capacity constitutes a significant threat to the species.

*D. The inadequacy of existing regulatory mechanisms.* *Lesquerella filiformis* is officially listed as endangered by the State of Missouri. Missouri regulations prohibit exportation, transportation, or sale of plants on the State or Federal lists. Collecting, digging, or picking any rare or endangered plant without permission of the property owner is also prohibited by State regulation. Three populations of *Lesquerella filiformis* are found on State land within highway rights-of-way. Two populations of this species occur on Federal lands administered by the National Park Service. Park Service regulations prohibit the removal of plants from parks without a collector's permit; these regulations will be further strengthened by prohibitions of the Endangered Species Act. These restrictions on collecting and trade, however, do not specifically provide for protection or management of the species' habitat.

*E. Other natural or manmade factors affecting its continued existence.* None known.

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based

on this evaluation, the preferred action is to list *Lesquerella filiformis* as endangered. Only nine populations of this species are known to exist and four of these populations are on privately owned property and receive no protection or management designed to enhance the species' continued existence. Endangered status is appropriate because of the vulnerability of this species. For reasons detailed below, it is not considered prudent to propose designation of critical habitat.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species that is considered to be critical habitat at the time the species is determined to be endangered or threatened. The designation of critical habitat is not considered to be prudent when such designation would not be of net benefit to the species involved (50 CFR 424.12). The Service believes that designation of critical habitat for *Lesquerella filiformis* would not be prudent because no benefit to the species can be identified that would outweigh the potential threat of vandalism or collection, which might be exacerbated by the publication of a detailed critical habitat map.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for land acquisition, if necessary, and cooperation with the States. It also requires that recovery actions be carried out for all listed species. These actions are initiated by the Service following listing. The protection required of Federal agencies and applicable prohibitions against collecting are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposal at 48 FR 29990; June 19, 1983). Section 7(a)(4) requires Federal agencies

to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. When a species is listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If an activity may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The National Park Service has jurisdiction over a portion of this species' habitat. Federal activities that could impact *Lesquerella filiformis* and its habitat in the future may include recreational and interpretive development. It has been the experience of the Service that the majority of section 7 consultations are resolved so that the species is protected and the project can continue.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plant species. With respect to *Lesquerella filiformis*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions would apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. International and interstate commerce in *Lesquerella filiformis* is not known to exist. It is anticipated that few trade permits would ever be sought or issued, since this plant is not common in cultivation or in the wild.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species in areas under Federal jurisdiction. This prohibition would apply to *Lesquerella filiformis*.

Permits for exceptions to this prohibition are available under regulations published September 30, 1985 (50 FR 39681, codified at 50 CFR 17.62). It is anticipated that few collecting permits for the species would ever be requested. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1903).

#### Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered and threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposed rule, are hereby solicited. Comments particularly are sought concerning the following:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Lesquerella filiformis*;

(2) The location of any additional populations of *Lesquerella filiformis* and the reasons why any habitat of this species should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range and distribution of this species; and

(4) Current or planned activities in the subject area and their possible impacts on *Lesquerella filiformis*.

Final promulgation of a regulation on *Lesquerella filiformis* will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111.

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the

authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. The reasons for this determination were published in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### Literature Cited

- Morgan, S.W. 1980. Status report on *Lesquerella filiformis* Rollins. Missouri Department of Conservation. Unpub. ms. 15 pp.
- Morgan, S.W. 1983. *Lesquerella filiformis*, an endemic mustard. Natural Areas Journal. Vol. 3. Oct. 1983.
- Payson, E.R. 1921. A monograph of the genus *Lesquerella*. Ann. Mo. Bot. Garden 8:103-236.
- Rollins, R.C. 1956. On the identity of *Lesquerella angustifolia*. Rhodora 58:199-202.
- Rollins, R.C. and E.A. Shaw. 1973. The genus *Lesquerella* (Cruciferae) in North America. Harvard University Press, Cambridge. pp. 92-95.
- Steyermark, J.A. 1963. Flora of Missouri. Iowa State University Press, Ames.

#### Author

The author of this proposed rule is William F. Harrison (see **ADDRESSES** section) (612/725-3276 of FTS 725-3276).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter 1, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under the family Brassicaceae, to the List of Endangered and Threatened Plants:

#### § 17.12 Endangered and threatened plants.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Brassicaceae—Mustard family:						
Lesquerella filiformis	Missouri bladder-pod	U.S.A. (MO)	E		NA	NA

Dated: March 2, 1986.

P. Daniel Smith,

*Deputy Assistant Secretary for Fish and  
Wildlife and Parks.*

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